3. Recent work A. S. telegraphy without wires.

Beginning in 1902, new pedagogical activity and concerns in the manufacture of new stations and in arming them with ships almost completely distracted A. S. from experimental research.

In 1902, the last improvement was introduced at the reception station of A.S., which significantly increased its sensitivity. In December of this year, A. S. received from Ducreta a new sensitive tube with silver powder and steel electrodes. This tube required several tenths of a volt, and therefore a potentiometer had to be introduced into the station circuit. These are the main features of the receiving station of the latter type, which significantly increased its constancy and sensitivity.

By this time, the task of experimental research was too complicated. It was necessary to find out the best form of the ship network and, at least approximately, to determine the period and nature of the oscillations emitted by it; Further, it was necessary to study the conditions of the surrounding area that impede transmission, and all this already required a whole system of stations and a significant, well-trained personnel.

Therefore, since 1903, experiments on wireless telegraphy have been almost exclusively concentrated in the Training and Mining detachment of the Baltic Fleet and 8 stations of this detachment, in parallel with the training of personnel, this year begin to find out a number of issues of practical telegraphy.

In the company of 1903, the vessels of the Mine Detachment were armed with the best, newly constructed stations of the latter type. Preparatory work for testing these stations was completed on July 4th, and the first long-haul flight was scheduled for the next day. A.S. came to this flight and personally took charge of the experiments. One of the test stations was installed on the island of Tuporansari, and the other on the mine cruiser Posadnik.

The weather of July 5th, clear and cloudless, favored the experiments. The Posadnik stopped at the coast station for about 9 hours and set up its receiving station. At 10 o’clock the watch was adjusted and the experiment began. The Posadnik took the SW course and, making 6 knots, departed from the shore. The spark length at both stations was 2½ centimeters. At one o'clock in the afternoon, when there was a distance of about 20 miles between the stations, the length of the spark was increased to 3½ cm and the exchange of telegrams took place without any difficulties. The Posadnik reported all the vessels oncoming and its course, and the coast station rehearsed the received telegrams. At 2 hours and 30 minutes from a distance of 30 miles from the Posadnik, it was reported that Gogland was visible. An hour later, the Posadnik changed the sensitive tube and the experiment continued with the same success. About 5 hours "Posadnik" rounded the northern side of Gogland and half an hour later, from a distance of 53 miles, the last connected telegram was received at the coast station. The reception of telegrams at Posadnik lasted even longer. The Posadnik received the last telegram at 7 o’clock from a distance of 68 miles. The best result for the receiving station was hard to expect. Her sensitivity is now equal to the sensitivity of a telephone receiver.

The flight described was the last test flight in which A.S. took part. In recent years, he could only spend several days in the winter with us in order to read his short course.

Since 1904, a number of measuring instruments have begun to appear in the field of telegraphy without wires, which made it possible to isolate a new extremely important "measuring part" from this area. This part immediately put the tests to solid ground, and the further success of wire-less telegraphy became quite secure.

Among the newly appeared measuring instruments, the instrument A.S., designated for measuring the capacity of ship networks, stands out especially. This instrument, which measures small capacitances with great accuracy, was given to us by A. S. for testing in the summer of 1905, when he himself was completely absorbed in new studies on damping oscillations. But death unexpectedly interrupted almost a decade of activity in the new, created by himself, field in the midst of it, and we forever lost a brilliant solution, like all others, to the last theme of the deceased.